



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPEAL BRIEF FOR THE APPELLANTS

Ex parte Toshio YAMAGIWA

SEALANT-CONTAINING TIRE

Serial Number: 09/926,485

Filed: January 25, 2002

Appeal No.:

Group Art Unit: 2814

Examiner: Fischer, Justin R.

Submitted herewith is an Appeal Brief. A check in the amount of Five Hundred Dollars (\$500.00) is enclosed to cover the official fees for the Appeal Brief. Please charge any fee deficiencies required with respect to this paper, or overpayment to our Deposit Account No. 01-2300, **referencing docket number 107348-00179**

Respectfully submitted,

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Date: January 4, 2005



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Confirmation No.: 5678

Toshio YAMAGIWA

Art Unit: 1733

Application No.: 09/926,485

Examiner: Fischer, Justin R.

Filed: January 25, 2002

Attorney Dkt. No.: 107348-00179

For: SEALANT-CONTAINING TIRE

BRIEF ON APPEAL

Date: January 4, 2005

I. INTRODUCTION

This is an appeal from the action of the Examiner dated May 25, 2004, finally rejecting claim 1, the only claim pending in this application, as being unpatentable over certain prior art under 35 U.S.C. 103(a). A Notice of Appeal was timely filed on September 27, 2004, with a Petition for Extension of Time. This Brief is being timely filed with a Petition for Extension of Time.

II. REAL PARTY IN INTEREST

The real party in interest in present application on appeal is Honda Giken Kogyo Kabushiki Kaisha.

III. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the Appellants, Appellants' representative or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

IV. STATUS OF AMENDMENTS

Responses were timely filed on August 25, 2004, and September 7, 2004. According to Advisory Actions mailed September 13, 2004, and October 12, 2004, the amendments to claim 1 made in these Responses will be entered.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates to a sealant-containing tire comprising a tire body, an outer liner fastened to an inner surface of a tread of the tire body, and an inner liner defining an air chamber inside the inner liner, the outer liner and the inner liner together defining an annular sealant chamber therebetween which is filled with sealant, the sealant chamber and the air chamber being partitioned by said inner liner, wherein the inner liner is formed of a material of a 300% modulus of 60kgf/cm² or less.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chimizard (U.S. Patent No. 4,286,643) in view of Beers (JP 7-266454) and optionally in view of either one of Chien (U.S. Patent No. 3,563,294) or Reinowski (U.S. Patent No. 3,042,098).

VII. ARGUMENT

i. The Law

The law regarding factual inquiries to determine obviousness/non-obviousness.

Several basic factual inquiries must be made to determine obviousness or non-obviousness of patent application claims under 35 U.S.C. § 103. These factual inquiries are set forth in Graham v. John Deere Co., 383 U.S. 1,17,148 U.S.P.Q. 459, 467 (1996):

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; the level of ordinary skill in the pertinent art resolved. Against this backdrop, the obviousness or non-obviousness of the subject matter is determined.

The specific factual inquiries set forth in *Graham* have not been considered or properly applied by the Examiner formulating the rejections of claims 4 and 5. Particularly the differences between the prior art and the claims were not properly determined. As stated by the Federal Circuit in In re Ochiai, 37 U.S.P.Q. 2d 1127, 1131 (Fed. Cir. 1995):

[t]he test of obviousness *vel non* is statutory. It requires that one compare the claim's subject matter as a whole with a prior art to which the subject matter pertains. 35 U.S.C. § 103.

The inquiry is highly fact-specific by design.... When the references cited by the Examiner fail to establish a *prima facie* case of obviousness, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). (Emphasis added.)

When rejecting claims under 35 U.S.C. § 103, an Examiner bears an initial burden of presenting a *prima facie* case of obviousness. A *prima facie* case of obviousness is established only if the teachings of the prior art would have suggested the claimed subject matter to a person of ordinary skill in the art. If an Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. See: In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q. 2d. 1955 (Fed. Cir. 1993). "If examination.... does not produce a *prima facie* case of unpatentability, then without more the Appellant is entitled to the grant of the patent." In re Oetiker, 977 F.2d 1443, 1445-1446 24 U.S.P.Q. 2d. 1443, 1444 (Fed. Cir. 1992).

Appellants respectfully submit that the Examiner has not made a proper *prima facie* rejection of claim 1 under 35 U.S.C. § 103(a), because the combination of prior art references cited fails to teach or suggest the present invention. In particular, the asserted combination of prior art references cited fail to teach or suggest each and every feature set forth in the claim.

The pending claim requires, “[a] sealant-containing tire comprising a tire body, an outer liner fastened to an inner surface of a tread of the tire body, and an inner liner defining an air chamber inside the inner liner, the outer liner and the inner liner together defining an annular sealant chamber therebetween which is filled with sealant, the sealant chamber and the air chamber being partitioned by said inner liner, wherein the inner liner is formed of a material of a 300% modulus of 60kgf/cm² or less.”

Thus, the tire according to claim 1 has a sealant chamber defined between an outer liner and an inner liner, wherein **the outer liner is fastened to an inner surface of a tread of a tire body**, and the inner liner is formed of a material having a 300% modulus of 60 kgf/cm² or less.

Chemizard et al. discloses a pneumatic tire having a lining of puncture sealing product. Chemizard et al. includes an “inner covering 5 [that] is covered by a partitioned lining 6 of puncture self-sealing product...[that] can be made from an open ribbon 20 (FIG. 2) or from an entirely closed ribbon 30 (FIG. 4) or also a partially closed ribbon 40 (FIG. 5) or 50 (FIG. 6)” (column 1, lines 61-64).

It is noted that the Chemizard nowhere teaches or suggests that the ribbon is fastened to an inner surface of a tread of the tire body, as would be required to meet the limitations of the present claim. Chemizard teaches that the ribbon is attached to the

inner covering 5 by “winding of the ribbons 20, 30, 40, or 50 around the inner covering 5 on a building drum...” (column 2, lines 60-61).

Additionally, the structure of Chemizard does not result in any “**annular** sealant chamber...filled with sealant,” as required by the present claim. In particular, any of the sealant chambers formed by the construction of Chemizard would not be considered to be “annular” as required by the present claim.

Additionally, as the Office Action notes, Chemizard is completely silent as to a composition having a 300% modulus of an inner liner.

Beers, which discloses a pneumatic tire having an inner liner of cured rubber compound containing LDPE or LLDPE, fails to make up for the deficiencies in Chemizard. Beers merely teaches a liner that is adhered to or integral with the inside surface of a tire and does not relate to a (inner) liner that cooperates with an outer side liner fastened to a tire tread surface for defining an annular sealant chamber between the two liners. In particular, Beers fails to teach or suggest an outer liner fastened to an inner surface of a tread of a tire body and also fails to teach or suggest an annular sealant chamber filled with sealant, both as required by the present claim.

Regarding a composition having a 300% modulus of an inner liner, Beers nowhere teaches or suggests such a liner spaced by a sealant layer from the inner surface of a tread of the tire body.

Chien, which discloses a puncture sealing band, fails to make up for the deficiencies in Chemizard and Beers. In particular, Chien fails to teach or suggest an outer liner fastened to an inner surface of a tread of a tire body and also fails to teach or suggest an annular sealant chamber filled with sealant and fails to teach or suggest

forming (only) the inner liner of a material of a 300% modulus of 60kgf/cm² or less, all as required by the present claim.

Reinowski et al., which discloses a puncture-sealant composition and tubeless pneumatic tire, fails to make up for the deficiencies in Chemizard, Beers and Chien. In particular, Reinowski et al. fails to teach or suggest an outer liner fastened to an inner surface of a tread of a tire body and also fails to teach or suggest an annular sealant chamber filled with sealant fails to teach or suggest forming (only) the inner liner of a material of a 300% modulus of 60kgf/cm² or less, all as required by the present claim.

Thus, as elements of the present claim are missing from the cited combination of references, Applicants respectfully submit that the presently claimed invention would not have been obvious thereover for at least these reasons.

Appellants respectfully submit that the Examiner has not made a proper *prima facie* rejection under 35 U.S.C. § 103(a), because the combination of prior art references cited fails to teach or suggest the invention of the presently pending claim.

For all of the above-noted reasons, it is strongly contended that clear differences exist between the present invention as recited in claim 1 and the prior art relied upon by the Office Action.

This final rejection being in error, therefore it is respectfully requested that this Honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case and indicate the allowability of claim 1.

In the event that this paper is not considered timely filed, Appellants respectfully petition for an appropriate extension of time. Any fees for such extension, together with any additional fees which may be due with respect to this paper, may be charged to

Deposit Account No. 01-2300, making reference to attorney docket number 107348-00179.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is written in a cursive style with a horizontal line underneath it.

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APPENDIX 1

CLAIM ON APPEAL

1. (Previously Presented) A sealant-containing tire comprising a tire body, an outer liner fastened to an inner surface of a tread of the tire body, and an inner liner defining an air chamber inside the inner liner, the outer liner and the inner liner together defining an annular sealant chamber therebetween which is filled with sealant, the sealant chamber and the air chamber being partitioned by said inner liner,

wherein the inner liner is formed of a material of a 300% modulus of 60kgf/cm² or less.